

## ABSTRACT OF THE DISCLOSURE

A transformer comprises a coil portion having a plurality of windings, and a plurality of cores arranged to sandwich the coil portion from aligning directions of the windings, and the windings includes ring-like portions formed by winding a flat-type wire like a ring to overlap each other; both end portions of the flat-type wire are led from the ring-like portions respectively; the plurality of windings and the plurality of cores are arranged along the overlapped direction of the flat-type wire; a projected portion is formed on a first core; the ring-like portions are positioned such that the ring-like portions are fitted on an outer side of the projected portion; a flat surface portion of a second core is positioned to oppose to the projected portion; a gap is formed between the flat surface portion and a top end portion of the projected portion, and the windings are positioned at positions except a position that surrounds the gap.